REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

The Examiner's attention is drawn to the concurrently filed IDS, for which the requisite fee is included.

The Examiner's provisional double-patenting rejections of various claims *vis-à-vis* copending application Serial Nos. 10/573,918 and 10/573,881 are appreciatively noted. If the above effected amendment does not already cure this problem, further steps will be taken in the future to avoid any actual double-patenting situation.

In response to the Examiner's formality-based objection to include certain reference signs in the drawings, these reference signs have merely been cancelled from the specification, thus mooting this ground of objection.

The status of the U.S. priority application has been updated in the specification as requested – as well as adding cross-references to the other related applications.

In response to the Examiner's request for a better definition of acronyms, definitions have been added to the specification for at least the acronyms identified by the Examiner. However, it is respectfully noted that even these acronyms, as well as any others that might be used throughout the specification, are believed to be immediately understood by those having skill in the relevant art. In effect, the acronyms have become an accepted part of the normal language for communicating between those

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having ordinary skill in the relevant art and thus any further definitions should be unnecessary.

In response to the Examiner's request, any embedded hyperlinks or other form of browser-executable code have been deleted or modified so as to not be executable. If the Examiner finds any additional such instances in the specification, then the Examiner is hereby authorized to modify/delete such occurrences via an Examiner's amendment.

In response to the formality-based objection to claim 28, line 2, the requested amendment has been effected.

In response to the rejection of claims 1-27 and 30-36 under 35 U.S.C. §112, second paragraph, claims 6, 8, 32 and 36 have been amended so as to moot the stated grounds for each such rejection.

There being no other outstanding formality-based objection/rejection, it is believed that the applicants have now overcome all such outstanding objections/rejections. If there are any remaining such issues, it is respectfully requested that the undersigned be telephoned for prompt resolution.

The rejection of claims 1-12, 15-22 and 25-36 under 35 U.S.C. §102 as allegedly anticipated by Ohno '016 is respectfully traversed.

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It will be observed that claim 1 has been amended so as to include, *inter alia*, the substance of original dependent claim 33, which has now been cancelled accordingly without prejudice or disclaimer.

Claim 33 as amended is directed to the feature that the second (low priority) operating system (OS) is modified to prevent it from masking interrupts. The purpose of this feature is described in the specification at the first paragraph on page 18. The second OS is modified to remove masking of hardware interrupts that is always preemptable by the first (high priority) OS.

This feature, *inter alia,* is not disclosed by Ohno. Ohno, in particular the passage referred to by the Examiner at 7:21-54, discloses that interrupts from OS-A (which correspond to applicants' second operating system) are masked if OS-B (corresponding to applicants' first operating system) is operating. Clearly, this is different from preventing OS-A (the second operating system) from masking interrupts.

The modification made in the Ohno OS-A (low-priority) is:

> "...only the process for the interrupt controller 19 is modified,
> and other process or components are not modified." [at
> 10:57-59]

The changes mask individual interrupt lines connected to the devices managed by OS-A, at the interrupt controller level, when scheduling OS-B (high priority), in order to prevent preemption by OS-A.

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This may ensure that OS-B is not preempted by an OS-A device interrupt while it is running. However, it does not ensure that OS-B can preempt OS-A while it is running. Indeed, if OS-A masks interrupts at the CPU level, then it can introduce any kind of latency (up to famine) for OS-B execution.

Moreover, it is very common for multiple devices to share the same interrupt line, in which case the Ohno mechanism would not work. If a device used by OS-A and a device used by OS-B share the same interrupt line, there is no way to mask the line for OS-A only.

In applicants' claimed invention, OS-A is modified to prevent it from masking interrupts at the CPU level by replacing the hardware masking (CPU instruction) by software/logical masking. This indeed ensures that OS-A <u>can</u> be preempted by OS-B at (almost) any time.

In addition, when a hardware interrupt occurs, the hypervisor determines who should handle it. If OS-B is high, then the interrupt is handled immediately. If OS-A is low, it is deferred by transforming it into a virtual (software) interrupt that will be injected into OS-A when scheduled (i.e., when OS-B yields the CPU).

Another major difference is found at Ohno at 4:8-8-14 where Ohno requires the "inter-OS control program" to run as a device driver of OS-A, the general purpose OS (not to tell as a Linux kernel module).

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As it is stated somewhere else that OS-B interfaces with "inter-OS control" via function calls, it appears that OS-B (RTOS) is somehow link-edited with and part of the device-driver.

In applicants' exemplary embodiment, the hypervisor is stand-alone, running on the bare hardware, before and below all the guest operating systems. Guest operating systems are interfacing with the hypervisor only through CPU traps, exceptions or interrupts (no function calls).

Given the fundamental deficiencies of Ohno already noted, it is not necessary at this time to detail additional deficiencies with respect to other aspects of the rejected claims. Suffice it to note that, as a matter of law, it is impossible to support even a *prima facie* case of anticipation unless a single cited prior art reference teaches each and every feature of each rejected claim.

The rejection of claims 13, 14, 23 and 24 under 35 U.S.C. §103 as allegedly being made "obvious" based on Ohno in view of Endo '303 is also respectfully traversed.

Fundamental deficiencies of a parent claim have already been noted with respect to Ohno – and Endo does not supply those deficiencies. Accordingly, it is not necessary at this time to detail additional deficiencies of this allegedly "obvious" com-bination of references. Suffice it to note that, as a matter of law, it is impossible to

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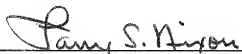Eric LESCOUET, et al.
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support even a *prima facie* case of "obviousness" under 35 U.S.C. §103 unless the cited

prior art teaches or suggests each and every feature of each rejected claim.

Accordingly, this entire applicator is now believed to be in allowable condition,

and a formal notice to that effect is respectfully solicited.

Respectfully submitted,

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